

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Examiner : Deschere, Andrew M.
Art Unit : 2836
Applicant : Baarman, David W.
Serial No. : 10/689,375
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For : POWER ADAPTER FOR A REMOTE DEVICE
Attorney Docket : 120270.120488-0001

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APPEAL BRIEF

This is an appeal from a final rejection of claims 1, 3, 5-8, 12-13, 23-24, and 47-51 by Examiner Deschere and Supervisory Primary Examiner Sherry.

Applicant : Baarman, David W.
Serial No. : 10/689,375
Page : 2

I. Real Party in Interest

The real party in interest is Access Business Group International LLC of 7575
Fulton Street East, Ada, Michigan 49355, the assignee of record.

Applicant : Baarman, David W.
Serial No. : 10/689,375
Page : 3

II. Related Appeals and Interferences

There are no related appeals or interferences known to the Appellant, the Appellant's legal representative, or the Appellant's assignee which may be related to, directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

Applicant : Baarman, David W.
Serial No. : 10/689,375
Page : 4

III. Status of Claims

Claims 1, 3, 5-8, 12-13, 23-24, and 47-51 are pending and are under final rejection. Claims 2, 4, 9-11, 14-22 and 25-46 are canceled. Applicant appeals with respect to claims 1, 3, 5-8, 12-13, 23-24, and 47-51.

Applicant : Baarman, David W.
Serial No. : 10/689,375
Page : 5

IV. Status of Amendments

No amendment has been filed subsequent to the final rejection in the Office
Action mailed on February 12, 2008.

V. Summary of Claimed Subject Matter

The application includes three independent claims – namely 1, 13, and 23.

A. Claim 1

As defined in independent claim 1, the present invention is a system for charging a remote device rechargeable power source. The system includes a remote device 12, a contactless power supply (CPS) 10, and an adapter 14 connectable to the remote device. The remote device 12 includes the remote device rechargeable power source 20 and a remote device transceiver 24. The CPS 10 includes a primary and a CPS transceiver 36. The adapter 14 includes a secondary and a power regulator 48 to supply power to the remote device rechargeable power source 20. The adapter also includes a first transceiver 44 to establish a first two-way communication link with the remote device transceiver 24 and a second adapter transceiver 46 to establish two-way communication link with the CPS transceiver 36. (Figs. 2 and 3; page 4, lines 19-21; page 6, line 3; page 7, lines 16-20).

B. Claim 13

As defined in independent claim 13, the present invention is a remote device charging system. The system includes a remote device 12, a CPS 10, and an adapter 14. The CPS 10 includes a primary, and the adapter 14 includes a secondary and an adapter rechargeable power source 42. The system also includes a first two-way communication link between the remote device 12 and the adapter 14 and a second two-way communication link between the adapter 14 and the CPS 10. (Figs. 2 and 3; page 8, lines 10-22).

C. Claim 23

As defined in independent claim 23, the present invention is a method of connecting a remote device to a network through a CPS. The method includes the creation of four communication links – a first link 24 between a remote device 12 and an adapter 14 connectable to the remote device (step 106), a second link between the adapter 14 and the CPS 10 (step 104), a third link between the CPS 10 and a computer 16 (Fig. 3), and a fourth link between the computer 16 and a network 18. (Figs. 2-4; page 4, lines 14-18; page 8, lines 10-22). Consequently, the remote device 12 can communicate with the network 18 through the CPS using the first, second, third, and fourth communication links.

Applicant : Baarman, David W.
Serial No. : 10/689,375
Page : 8

VI. Grounds of Rejection to Be Reviewed on Appeal

A. Claims 1, 3, 12-13, 23-24, and 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,455,466 to Parks and U.S. Patent 6,424,124 to Ichihara.

B. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks and Ichihara, and further in view of U.S. Patent 6,703,920 to Zimmer.

Appellant notes that claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Parks and Ichihara. However, claim 12 is dependent on claim 8, which was rejected on the basis of those references and further in view of Zimmer. Accordingly, claim 12 is addressed in this Appeal Brief in conjunction with claims 5-8.

VII. Argument

A. Claims 1, 3, 13, 23-24, and 47-51 Are Not Obvious In View of Parks and Ichihara

1. Independent Claim 1

The present invention as defined in claim 1 is not obvious in view of the hypothetical combination of Parks and Ichihara, and the proposed combination of Parks and Ichihara is based on improper hindsight.

a. Claim 1 is Not Obvious in View of the Proposed Combination of
Parks and Ichihara

Parks discloses a system including a remote device 12 (i.e. a personal digital assistant or PDA), a base unit 14, and a computer 16. (This Appeal Brief uses the numbers in the Parks drawings, which are different from the numbers in the Parks specification.) The base unit 14 is connected to a power source 18 by a power cord 20, and the base unit 14 is connected to the computer 16 by a line 210. In other words, the base unit 14 is a personal digital assistant (PDA) base connected to a computer and a power source using conventional wires. The base unit 14 provides wireless power and communication to the PDA 12 docked within the base.

With respect to independent claim 1, Parks does not disclose (1) an adapter in addition to the remote device and the contactless power supply (CPS), (2) an adapter having a power regulator to supply power to the remote device, (3) a separate rechargeable power source for powering the adapter, (4) a first adapter transceiver within the adapter for establishing a first two-way communication link with the remote device, or (5) a second adapter transceiver to establish a second two-way communication link with the CPS. Thus, Parks totally fails to

suggest the concept of a separate adapter that is connectable to the remote device for allowing the device to receive power from a CPS, much less an adapter that includes all of the aforementioned elements.

Acknowledging the shortcomings of Parks, Ichihara is cited as allegedly disclosing a system for supplying power to portable devices. The examiner asserts that the portable computer 2 functions as an “adapter.” In Ichihara, a mobile phone 1 is charged by electric power from the computer 2 via an interface card 4; and a coupling cable 5 enables data communication between the mobile phone and the computer. (Col. 5, line 65-Col. 6, line 6). Thus, the cable 5 provides a *single* two-way communication link between the mobile phone and the computer. The computer does not include a second two-way communication link with a CPS, much less a second adapter transceiver to establish such a two-way communication link. Accordingly, the computer of Ichihara is not an adapter as claimed in claim 1 of the present invention.

The examiner states that “[a] combination of Parks and Ichihara would provide an adapter (portable personal computer) that receives power from and communicates with a contactless power supply (base unit) and supplies power to and communicates with a remote device (mobile phone).” (Office Action dated February 12, 2008, page 3, 2nd paragraph). Contrary to the examiner’s assertions, the logical result of combining Parks and Ichihara would be a single personal computer having both (1) a PDA inductively coupled to a base unit that is cabled to the computer and (2) a mobile phone that is cabled to the computer. Thus, the resulting combination fails to disclose an adapter connectable to a remote device and having (1) a first

adapter transceiver to establish a first two-way communication link with the remote device transceiver and (2) a *second* adapter transceiver to establish a second two-way communication link with the CPS transceiver. Thus, the two references – even when combined – do not disclose each element of claim 1.

b. The Proposed Combination of Parks and Ichihara is Based on
Improper Hindsight

The Examiner has not suggested why Parks and Ichihara would be combined for any reason other than a hindsight attempt to reconstruct the present invention. “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S.Ct 1727, 1741 (2007).

Neither Parks nor Ichihara suggests that a remote device without a CPS power interface can use an adapter to receive power from a CPS. In both Parks and Ichihara, the respective mobile devices have the necessary circuitry or components to allow the devices to be charged by the disclosed chargers without an adapter. Specifically, in Parks, the portable electronic device includes a rechargeable battery 225 and a battery charging circuit 224 that allows the device to receive power inductively from the base unit. (Col. 3, lines 63-67). In Ichihara, the mobile phone includes a battery control circuit 307 that charges the battery 308 using power supplied by the computer. (Col. 5, lines 29-31). There is no teaching or suggestion that either of the mobile devices in Parks or Ichihara require, or could possibly use, an adapter for connecting to a CPS. Thus, neither Parks nor Ichihara – nor the art in general – provides a

motivation to a person of skill in the art to combine and/or modify the references to achieve the invention of claim 1.

In view of the shortcomings of Parks and Ichihara with respect to claim 1, the rejection of claim 1 under 35 U.S.C. 103(a) is improper and should be reversed.

2. Dependent Claim 3

Claim 3 is allowable for at least the reasons stated above with respect to independent base claim 1. Additionally, the examiner acknowledges that Parks does not disclose the details of the charging circuit 224 and, therefore, does not disclose a controller to control the regulator as recited in dependent claim 3. The examiner alleges that it would have been obvious to control the battery of Parks with a CPU as taught by Ichihara. However, the CPU of Ichihara is configured to determine the charging requirements of a battery in a mobile device and is not configured to control a power regulator in an adapter that has two-way communication links with both a remote device and a CPS. Thus, the combination of Parks and Ichihara fails to disclose the additional subject matter of claim 3.

3. Independent Claim 13

The present invention as defined in claim 13 is not obvious in view of the hypothetical combination of Parks and Ichihara, and the proposed combination of Parks and Ichihara is based on improper hindsight.

a. Claim 13 is Not Obvious in View of the Proposed Combination of
Parks and Ichihara

As noted above, Parks discloses a base unit that is a conventional PDA base connected to a conventional computer. The base unit provides wireless power and communication to the PDA.

With respect to independent claim 13, Parks does not disclose, teach or suggest (1) an adapter in addition to a remote device and a CPS, (2) an adapter that includes its own rechargeable power source, (3) an adapter with a secondary, (4) a first two-way communication link between the remote device and an adapter, or (5) a second two-way communication link between the adapter and the CPS. Accordingly, Parks does not have the structure, functionality, or benefits of the invention as defined in independent claim 13. Specifically, Parks does not allow a device without a CPS power interface to be charged using a CPS.

The examiner attempts to make up for the deficiencies of Parks by citing Ichihara, which allegedly discloses a computer that functions as an “adapter.” However, the computer of Ichihara is not an adapter as claimed in claim 13. As noted above, Ichihara specifically discloses that communication between the mobile phone and the computer takes place via an interface card 4 and a coupling cable 5. (Col. 5, line 65-Col. 6, line 6). Thus, the cable and interface card provide a *single* two-way communication link between the mobile phone and the computer. The computer does not include a second two-way communication link with a CPS. Moreover, the computer of Ichihara fails to disclose either a power source or a secondary for inductively

receiving power. For at least the reasons set forth above, the computer is not an adapter as claimed in claim 13 of the present invention.

The examiner states that “[a] combination of Parks and Ichihara would provide an adapter (portable personal computer) that receives power from and communicates with a contactless power supply (base unit) and supplies power to and communicates with a remote device (mobile phone).” (Office Action dated February 12, 2008, page 3, 2nd paragraph). Contrary to the examiner’s assertions, the logical result of combining Parks and Ichihara would be a single personal computer that is cabled to both (1) a base unit that is inductively coupled to a PDA and (2) a mobile phone. The resulting combination fails to disclose an adapter having both a secondary and a rechargeable power source, a first two-way communication link between the remote device and the adapter, and a second two-way communication link between the adapter and the CPS. This subject matter in claim 13, which is not present in Ichihara or Parks, allow a device without a CPS power interface to receive power from a CPS.

b. The Proposed Combination of Parks and Ichihara is Based on Improper Hindsight

The Examiner has not suggested why Parks and Ichihara would be combined for any reason other than a hindsight attempt to reconstruct the present invention. Neither Parks nor Ichihara suggests that a device having no CPS power interface can be adapted to receive power from a CPS through the use of an adapter. In both Parks and Ichihara, the respective devices have the necessary circuitry or components to allow the devices to be charged by the disclosed chargers. Specifically, in Parks, the portable electronic device includes a rechargeable battery

225 and a battery charging circuit 224 that allows the device to receive power inductively from the base unit. (Col. 3, lines 63-67). In Ichihara, the mobile phone includes a battery control circuit 307 that charges the battery 308 using power supplied by the computer. (Col. 5, lines 29-31). There is no teaching, suggestion or motivation that either of the mobile devices in Parks or Ichihara requires, or could possibly use, an adapter for connecting to a CPS. Thus, neither Parks nor Ichihara – nor the art in general – provides a motivation to a person of skill in the art to combine and/or modify the references to achieve the invention of claim 13.

In view of the shortcomings of Parks and Ichihara with respect to claim 13, the rejection of claim 13 under 35 U.S.C. 103(a) is improper and should be reversed.

4. Dependent Claim 47

In addition to the foregoing, dependent claim 47 further recites a computer and a third two-way communication link between the CPS and the computer. This subject matter, in combination with the claim 13 subject matter, is not remotely suggested by the proposed combination of Parks and Ichihara.

5. Dependent Claim 48

In addition to the reasons presented above, dependent claim 48 is allowable because neither Parks nor Ichihara discloses that the first and second communication links each include two transceivers. As noted above, the logical result of combining Parks and Ichihara would be a single personal computer that is cabled to both (1) a base unit that is inductively coupled to a PDA and (2) a mobile phone. Although the PDA and mobile phone may be capable of transferring power or data between these respective devices and the computer, the proposed

combination of Parks and Ichihara fails to disclose any transceivers, much less transceivers for the transfer of data or power between an adapter, as described above with respect to claim 13, and another component or element. Thus, the two references – even when combined – do not suggest the subject matter of dependent claim 48.

6. Dependent Claim 49

In addition to the reasons presented above, dependent claim 49 is allowable because neither Parks nor Ichihara discloses that each of the communication links includes two transceivers. As noted above, both Parks and Ichihara may include cables that function as communication links between (1) the PDA and the computer and (2) the computer and the mobile phone. However, the proposed combination fails to disclose any communication links between an adapter and another component or element, much less each of the communication links having two transceivers. Thus, the proposed combination of Parks and Ichihara does not suggest the subject matter of dependent claim 49.

7. Independent Claim 23

The present invention as defined in claim 23 is not obvious in view of the hypothetical combination of Parks and Ichihara, and the proposed combination of Parks and Ichihara is based on improper hindsight.

a. Claim 23 is Not Obvious in View of the Proposed Combination of
Parks and Ichihara

As discussed above, Parks discloses a base unit that is a conventional PDA base connected to a conventional computer. The base unit provides wireless power and communication to the PDA.

With respect to independent claim 23, Parks does not disclose (1) creating a first communication link between the remote device and an adapter, (2) creating a second communication link between an adapter and a contactless power supply, or (3) creating a fourth communication link between a computer and a network. As a result, Parks does not have the elements, functionality, or benefits of the present invention as defined in claim 23. Specifically, Parks does not allow a remote device to communicate with a network through a contactless power supply and specifically through the recited communication links.

Ichihara is again cited for the alleged disclosure of a portable computer that functions as an “adapter.” However, as discussed above, the computer of Ichihara is not an adapter as claimed in claim 23.

Further, Ichihara discloses that data communication and the sending/receiving of signals between the mobile phone and the computer take place via an interface card and a coupling cable. (Col. 5, line 65-Col. 6, line 6). Thus, the only communication link in Ichihara is the *single* two-way communication link between the mobile phone and the computer. There are no other communication links, and there is no contactless power supply.

The examiner states that “the above combination of Parks and Ichihara provides a first communication link (between a mobile phone and a portable personal computer), a second communication link (between a portable personal computer and a base unit), and a third communication link (between a base unit and a computer).” Thus, as modified by the examiner, in order to account for each element claimed in claim 23, Parks would include an additional computer that allegedly functions as an “adapter.” The examiner acknowledges that a fourth communication link is not disclosed, but states that it is known in the art to connect a computer to a network via a communication link. (Office Action dated February 12, 2008, page 4, 3rd paragraph).

Contrary to the examiner’s assertions, the logical result of combining Parks and Ichihara would be a (1) first communication link between a base unit for a PDA and a computer and (2) a second communication link between a mobile phone and the computer. Because the computer of Ichihara is not an adapter as claimed in claim 23, the combination of Parks and Ichihara fails to disclose a communication link between an adapter and any other component or element.

Moreover, as acknowledged by the examiner, there is no disclosure in either Parks or Ichihara of a fourth communication link between a computer and network. The examiner states that it is well known in the art to connect a computer to a network via a communication link. However, Appellant submits that it is *not* known in the art to allow a remote device to communicate with such a network through four communication links between (1) a remote device and an adapter, (2) an adapter and a CPS, (3) a CPS and a computer, and (4) a computer

and the network. Thus, the proposed combination of Parks and Ichihara fails to suggest the subject matter of claim 23.

b. The Proposed Combination of Parks and Ichihara is Based on
Improper Hindsight

As discussed above in conjunction with claims 1 and 13, the examiner has not suggested why Parks and Ichihara would be combined for any reason other than a hindsight attempt to reconstruct the present invention. Neither Parks nor Ichihara – nor the art in general – provides a teaching, suggestion, or motivation to a person of skill in the art to combine or modify their unrelated disclosures in an attempt to recreate the invention as defined in claim 23.

In view of the shortcomings of Parks and Ichihara, the rejection of claim 23 under 35 U.S.C. 103(a) is improper and should be reversed.

8. Dependent Claim 50

In addition to the subject matter of claim 23, dependent claim 50 recites (1) providing to the CPS through the first and second communication links information about a remote device rechargeable power source within the remote device and (2) supplying power to the remote device rechargeable power source in response to the information. Neither Parks nor Ichihara discloses any communication links between an adapter and another component. Accordingly, the proposed combination does not disclose providing information to a CPS through an adapter. Nor does the combination disclose supplying power in response to such information.

9. Dependent Claim 24

Dependent claim 24 additionally recites that the information is charging information. Nothing in Parks or Ichihara suggests that communicated information be charging information.

10. Dependent Claim 51

Dependent claim 51 additionally recites that the steps of creating first and second communication links includes using two transceivers. Although Parks and Ichihara individually disclose communication links (1) between the PDA and the computer and (2) between the computer and the mobile phone, respectively, neither Parks nor Ichihara discloses creating these connections using transceivers.

B. Claims 5-8 and 12 Are Not Obvious In View of Parks, Ichihara, and Zimmer

With respect to claims 5-8 and 12, the examiner acknowledges that neither Parks nor Ichihara discloses a variable impedance element. The examiner therefore cites Zimmer for the disclosure of a contactless interface that may include a variable impedance element.

As an initial point, Zimmer does not make up for the above-noted deficiencies of the proposed combination of Parks and Ichihara. Accordingly, claims 5-8 and 12 are allowable for at least the reasons set forth above with respect to independent base claim 1.

Moreover, neither of the systems disclosed in Parks or Ichihara would have any use for the variable impedance element of Zimmer. In fact, Parks and Ichihara teach away from such a combination. A variable impedance element is used to achieve optimum conditions for the inductive communication of data and power by matching a resonant frequency of a resonant

circuit to an excitation frequency. Ichihara does not disclose any type of contactless power transmission. Parks discloses a PDA that inductively receives power from a base unit. However, the primary and secondary windings are designed such that the primary automatically induces signals of identical frequency in the secondary. Consequently, a variable impedance would have no use in Parks – other than to tune the inductive coupling away from the resonant frequency. That of course would be nonsensical. Because neither Parks nor Ichihara could make use of a variable impedance element, any attempt to combine Zimmer with Parks and Ichihara could be based only on impermissible hindsight.

Accordingly, Appellant submits that the rejection of claims 5-8 and 12 under 35 U.S.C. 103(a) is improper and should be reversed.

VIII. Claims Appendix

1. A system for charging a remote device rechargeable power source comprising:
a remote device including the remote device rechargeable power source and a remote device transceiver;
a contactless power supply having a primary and a CPS transceiver;
an adapter connectable to the remote device and including a secondary, a power regulator to supply power to the remote device rechargeable power source, an adapter rechargeable power source for powering the adapter, a first adapter transceiver to establish a first two-way communication link with the remote device transceiver, and a second adapter transceiver to establish a second two-way communication link with the CPS transceiver.
3. The system of claim 1 further comprising a controller to control the power regulator.
5. The system of claim 3 where the controller includes a variable impedance element having an impedance.
6. The system of claim 5 where the controller is capable of changing the impedance of the variable impedance element.
7. The system of claim 6 where the variable impedance element is a variable inductor.
8. The system of claim 7 where the controller varies the impedance of the variable inductor in response to instructions from the contactless power supply through the second communication link.

12. The system of claim 8 where the adapter receives charging requirements from the remote device through the first communication link.

13. A remote device charging system comprising:
a remote device having a remote device rechargeable power source;
a contactless power supply including a primary;
an adapter including a secondary and an adapter rechargeable power source;
a first two-way communication link between the remote device and the adapter;
a second two-way communication link between the adapter and the contactless power supply.

23. A method of connecting a remote device to a network through a contactless power supply comprising:

creating a first communication link between the remote device and an adapter;
creating a second communication link between the adapter and the contactless power supply;

creating a third communication link between the contactless power supply and a computer; and

creating a fourth communication link between the computer and the network, whereby the remote device can communicate with the network through the first, second, third, and fourth communication links.

24. The method of claim 50 wherein the information includes charging information.

47. The system of claim 13 further comprising:

a computer; and

a third two-way communication link between the contactless power supply and the computer.

48. The system of claim 47 wherein each of the first and second communication links includes two transceivers.

49. The system of claim 13 wherein each of the communication links includes two transceivers.

50. The method of claim 23 further comprising:
providing to the contactless power supply through the first and second communication links information about a remote device rechargeable power source within the remote device; and

supplying power to the remote device rechargeable power source in response to the information.

51. The method of claim 23 wherein each of the first and second creating steps includes using two transceivers.

Applicant : Baarman, David W.
Serial No. : 10/689,375
Page : 25

IX. Evidence Appendix

No evidence has been submitted pursuant to §§ 1.130, 1.131, or 1.132, and no evidence has been entered by the examiner.

Applicant : Baarman, David W.
Serial No. : 10/689,375
Page : 26

X. Related Proceedings Appendix

There are no related proceedings.

Applicant : Baarman, David W.
Serial No. : 10/689,375
Page : 27

In summary, the Examiners' rejections under 35 U.S.C. 103(a) are improper and/or unfounded, and should be reversed.

Respectfully submitted,

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